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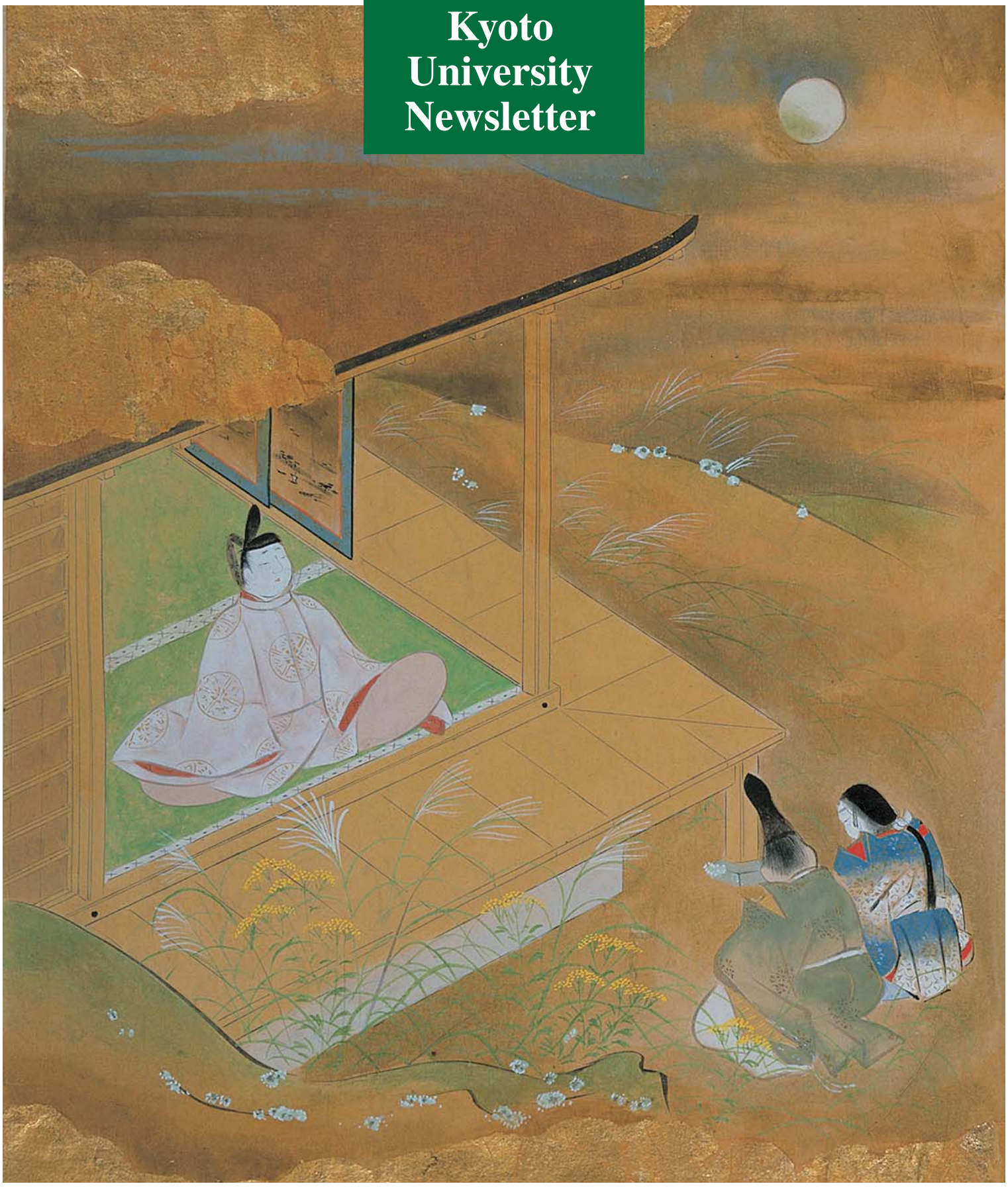
Greetings from Kyoto-U

楽友 Raku-Yu

Kyoto University Newsletter

AUTUMN 2011
Issue **20**



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A Note on Order of Names
As a general rule, names appearing in *Raku-Yu* are written in given name/family name order.

楽
Raku-Yu means to respect, treasure, and enjoy one's friendship.
友

This name was taken from the assembly hall called "*Raku-Yu Kaikan*" that commemorated the 25th anniversary of the founding of Kyoto University.

Editor's Notes

The act of translation is more than simply transposing one meaning into another. The apparently stable ground of language on which the reader stands is challenged by the writer in such a way as to undermine any simple reliance on the supposed authority of the text. There is no perfect match. The reader finds herself falling into an abyss, so it seems, into an unbridgeable gap between different languages and cultures. Translation in this broader sense involves the encounter of the strange in the familiar, of finding anew one's place in one's language and culture. Translation undermines the idea of language acquisition in terms of progression through developmental stages, from a first language (mother tongue) to a second language (foreign tongue). This helps us reconsider foreign language education in the broader context of rediscovering one's relationship with one's native community and nation. Such education is needed to enable students to acquire a high-level command of foreign languages and the capacity to engage oneself in open-minded dialogue on the international scene. The superior command of a foreign language here requires not only academic skill, but also the willingness and spirit to open one's self to the foreign other. We hope that *Raku-Yu* serves such a role in producing the experience of translation.

Cover Photo: A scene from Section 73 "*Tsuki no uchi no katsura*" (A laurel tree on the moon) in the *Ise Monogatari* (Tales of Ise)

Kyoto University possesses a huge collection of valuable documents and historical materials, essential for studies of Japanese culture and history. On the covers of this issue and subsequent publications of *Raku-Yu*, the editors have decided to display photographs of such assets, housed in the University Library, the Kyoto University Museum, and other related facilities.

The cover of this issue depicts a scene from the *Ise Monogatari* (Tales of Ise), compiled in the early Heian Period (the 9th to the 10th century). The *Ise Monogatari* consists of 125 short *utamonogatari* (a small collection of *waka* or traditional Japanese short poems and their related episodes). This classical literary work serves as a cornerstone of Japanese culture, since its famous scenes have been repeatedly quoted in various literary works, including Noh theater scripts. Moreover, the scenes have provided motifs in a wide range of art genres, such as painting, furniture, and craftwork.

Most episodes concern romances between young men and women. It is believed that the hero was modeled on the life of Narihira Ariwara (825-880), a court noble known as a gifted poet who led an unrestrained romantic life. The cover of this issue depicts the hero, lamenting that he cannot contact a woman he loves, just as he cannot touch the laurel tree that, according to an old Chinese legend, grows on the moon. When we see the moon in the autumnal night sky, we often wish to see people we love. We probably have inherited this sentiment from our ancestors in the days of the *Ise Monogatari*.

Akihiko AKAMATSU Dr. Akamatsu was born in 1953 as a grandson of the head priest serving a sub-temple of Manpukuji Temple, a prestigious temple of the Zen sect of Buddhism. Until his high school days, he had aspired to become a researcher in quantum mechanics. However, he changed his mind and entered the Division of Philosophy, Faculty of Letters, Kyoto University. In 1981, after earning credits he quit the doctoral course at the Graduate School of Letters and entered the doctoral course at l'Université Sorbonne Nouvelle with a scholarship from the French government. In 1983, he earned a doctorate in Indian Studies from the university. After returning home, he served as a faculty member, including professor, at Kyushu University. In April 2001, he became a professor at the Graduate School of Letters, Kyoto University, assuming the office of Executive Vice-President in October 2010.
As Executive Vice-President for Student Affairs, Dr. Akamatsu is working to improve the environment for academic learning, extracurricular activities and the daily lives of students from Japan and abroad. Despite the magnitude of the role he is playing, he modestly stated that he was simply following the path paved by his predecessor, former Executive Director Shuzo Nishimura. At the same time, however, he enthusiastically expressed his determination to highlight the importance of the humanities and earn deservedly high recognition for the field, stating, "Study of the humanities tends to be unfairly valued throughout the world on the grounds that it does not have immediate practical application. Researchers in the humanities, however, learn from the past, contemplate and attempt to understand reality. This approach is essential for studies of sciences and engineering, as well. As an Executive Director having specialized in the humanities, I want to enhance academic recognition of the value of the humanities." His statement conveyed his sincere approach to accurately recognize the current situation of academia and his earnest quest for the ideal university.

The Future of Humanities at Kyoto University

I, being the Executive Vice-President and at the same time a scholar specializing in the humanities (strictly, my speciality is Indology), frequently speculate about the present situation regarding the humanities and their future at Kyoto University. Today, we are asked to set numerical targets in all academic disciplines which constitute learning at the university in order to assign "efficiency" to them. Could the humanities survive this type of critical evaluation? Most of the professors may say that the humanities will survive because they are the most important branch (not necessarily a trunk nor root!) of university learning. But, nobody actually believes this. Certainly, for instance, Oriental Studies at Kyoto University has always been very highly respected within the field of the humanities. However, such a reputation cannot assure the discipline's survival in these changing times. In fact, I often wonder whether the humanities can strongly survive at Kyoto University.

It is obvious that the humanities cannot provide occupational or professionally relevant knowledge or skills on a higher level, which is, in general, expected as a function of the university. Humanities is the study of the human condition using methods that are not objective but rather speculative. Therefore, it is both difficult and inappropriate to set objective criteria for evaluating disciplines within the humanities. On this point, there is a strong contrast with the Natural Sciences, Social Sciences, Formal Sciences, and Applied Sciences, the other branches of the university.

Subjectivity is the characteristic feature of the humanities. So given this, what should the specific function of the humanities be in the university? My answer is that it should be centered on thinking—thinking that creates alternative world views instead of ready-made ones. And it is this process of thinking that prepares us to be flexible when encountering changes in society or culture. In this way, the humanities should work against the abandonment of thinking. We should go on thinking constantly about all things. If the humanities are to survive, the university's humanists should ultimately become specialists on thinking. To conclude, I truly hope that the humanities play an important role in Kyoto University's future.

赤松明彦

Akihiko AKAMATSU
Executive Vice-President, Kyoto University

Envision the Future and Act for the Future

The Great East Japan Earthquake and Tsunami of March 11, 2011 caused unprecedented devastation to the Tohoku region. The disaster deprived many residents of their lives and livelihood, completely destroying the daily lives and economic/social infrastructures of the survivors. Still worse, due to the loss of electric power caused by the tsunami, a serious accident occurred at the Fukushima Daiichi Nuclear Power Plant. Nuclear Meltdowns and explosions of reactors' outer containment buildings due to hydrogen gas that had built up within those buildings resulted in the release of radioactive materials. The direct and indirect impacts of the accident affected not only Japan, but also other parts of the world.

The earthquake also affected the conventional values that Japanese people had long embraced. In this context, universities are expected to play a unique role as a repository of knowledge and wisdom in a wide range of academic fields. At Kyoto University, discussions were held on the role it could and should play. Based on results of these discussions, various programs are currently underway. To introduce them, the editor of *Raku-Yu* had the pleasure of interviewing Executive Vice-President Yuzo Ohnishi, who is leading the Earthquake Disaster Task Force. This article has been written based on this interview.

Measures Taken Immediately After the Earthquake

Immediately after the earthquake, the university's divisions received requests for assistance directly from many of the parties concerned. Although respective divisions initially responded to such requests on an individual basis, Kyoto University decided to establish a campus-wide organization to share related information across the campus and coordinate various relief programs. This is because we began to receive more and more requests for assistance from increasing numbers of organizations as the magnitude of devastation became clearer. For instance, Kyoto Prefectural government asked us to dispatch a disaster medical assistance team (DMAT) and a team to measure radiation doses and clean up the area around the nuclear power plant. The Japan Association of National Universities also asked us to assist universities in the affected region. To streamline such diverse demands and respond to them effectively, Kyoto University established the Earthquake Disaster Task Force, led by Executive Vice-President Yuzo Ohnishi, on the grounds that the disaster corresponded to "Critical Level 2," prescribed in the *Kyoto University Risk Management Guidelines*. Since then, various programs (see Table 1) have been launched under the coordination of the Task Force. In addition to the items listed in the Table, various other programs are underway under the initiatives of the respective divisions.

Kyoto University Conference on Measures against Large Natural Disasters and for Reconstruction

Although emergency relief activities were necessary immediately after the disaster, many people within and outside the campus began to consider that they should launch long-term and multifaceted programs to address fundamental problems in response to the affected regions' demands to recover and reconstruct their economies and communities. Meanwhile the disaster caused a loss of both facilities and human resources of major universities not only in the Tohoku region, but throughout East Japan, including Tokyo. Since the damage to Kyoto University was relatively minor, even though three our students lost their lives, we considered that Kyoto University should play a leading

Dispatching of medical and other staff from Kyoto University Hospital's Disaster Medical Assistance Team (DMAT).

Dispatching of medical doctors from Kyoto University Hospital.

Dispatching of radiation measurement experts to Fukushima Prefecture and other expert assistance.
- Faculty and staff from Kyoto University's Research Reactor Institute, Graduate School of Science and Institute for Chemical Research have been sent to Fukushima Prefecture as of March 19.
- The university is also providing information to MEXT and responding to technical inquiries from local government bodies.
- Faculty and staff from the Graduate School of Engineering and Kyoto University Hospital have been dispatched to conduct screening tests to enable displaced residents to return to their homes.

Material aid
- To provide emergency supplies of food and other items, we sent a part of Kyoto University's stores of emergency supplies to Tohoku University on March 23.
- Volunteers from the Graduate School of Informatics of Kyoto University sent shipments of information and communications technology equipment (used personal computers and printers etc.) to Iwate University on April 21, May 9 and June 8.

Measurement of environmental radiation on campus (readings taken at the Yoshida main campus, Uji, Katsura, Kumatori and Inuyama Campuses).
- Details of the measurements are available on the following website (Japanese Text): http://www.mext.go.jp/a_menu/saigaijohou/syousai/1303723.htm.

Making donations, etc.

Instructions for international students and researchers who temporarily leave Japan.

Admission of students and researchers from disaster-affected universities, etc.
- Official regulations for the admission of students and researchers from universities and research institutions affected by the Great East Japan Earthquake and Tsunami have been established.

Counseling and support.
- The Kyoto University Counseling Center is providing a counseling service for those affected by the disaster.
- The Praxis and Research Center for Clinical Psychology and Education of the Kyoto University Graduate School of Education is providing counseling for persons who have concerns or worries related to the Great East Japan Earthquake.

Symposia and other activities related to the recovery effort.
- "Large-Scale Natural Disasters: Response and Recovery," an emergency university symposium was held on April 28.
- "Future Energy Sources for a Safe and Secure Society," an emergency public symposium was held on May 9.
- Visits to the Kyoto University Museum by children from Fukushima were held on August 1 and 9. The visits were organized to raise the spirits of children who have been affected by the disasters.

Table 1 Current or already implemented principal measures in response to the Great East Japan Earthquake and Tsunami (as of August 25, 2011)

Kyoto University Promotes Discussions and Actions for Reviving Japan from the Devastation Caused by the Great East Japan Earthquake and Tsunami

role in conducting comprehensive studies of the disaster from broad and multifaceted perspectives, and in searching for ideal ways to revive and reconstruct Japan.

With this view, on April 28, we held the first meeting of the Kyoto University Conference on Measures against Large Natural Disasters and for Reconstruction, which brought together about 80 faculty members specializing in diverse academic fields.

In his opening address, President Hiroshi Matsumoto stated, "To address the aftermath of large disasters, such as the Great East Japan Earthquake, it is essential to promote collaboration among researchers in a wide variety of fields, including disaster reduction, nuclear sciences, medical science, engineering, natural sciences, social psychology, and pedagogy. Moreover, after embodying their knowledge and wisdom in practical programs, we should actually carry them out. To address the present challenge, which obliges us to change our conventional values, we must first build "interdisciplinary and organic partnerships" within Kyoto University, subsequently expanding such partnerships to involve other universities. I sincerely hope that by taking action, you will demonstrate Kyoto University's philosophy: Envision the Future and Act for the Future."

Following President Matsumoto, Director Ohnishi of the Earthquake Disaster Task Force explained responses taken by Kyoto University, by presenting a chart (Chart 1) of research areas in which Kyoto University is playing a leading role in disaster reduction, post-disaster recovery, and reconstruction.

In the first half of the meeting, three professors explained their relief activities in the affected region, visions for reconstruction, and post-disaster responses of the national government. Subsequently, group discussions were held on 10 different themes. Each small group, comprising specialists in diverse fields, held heated discussions. Many participants found it extremely valuable to discuss with researchers from other fields; some even commented that they found new research themes during the discussions. In this way, the meeting offered an ideal opportunity to integrate the expertise of specialists from

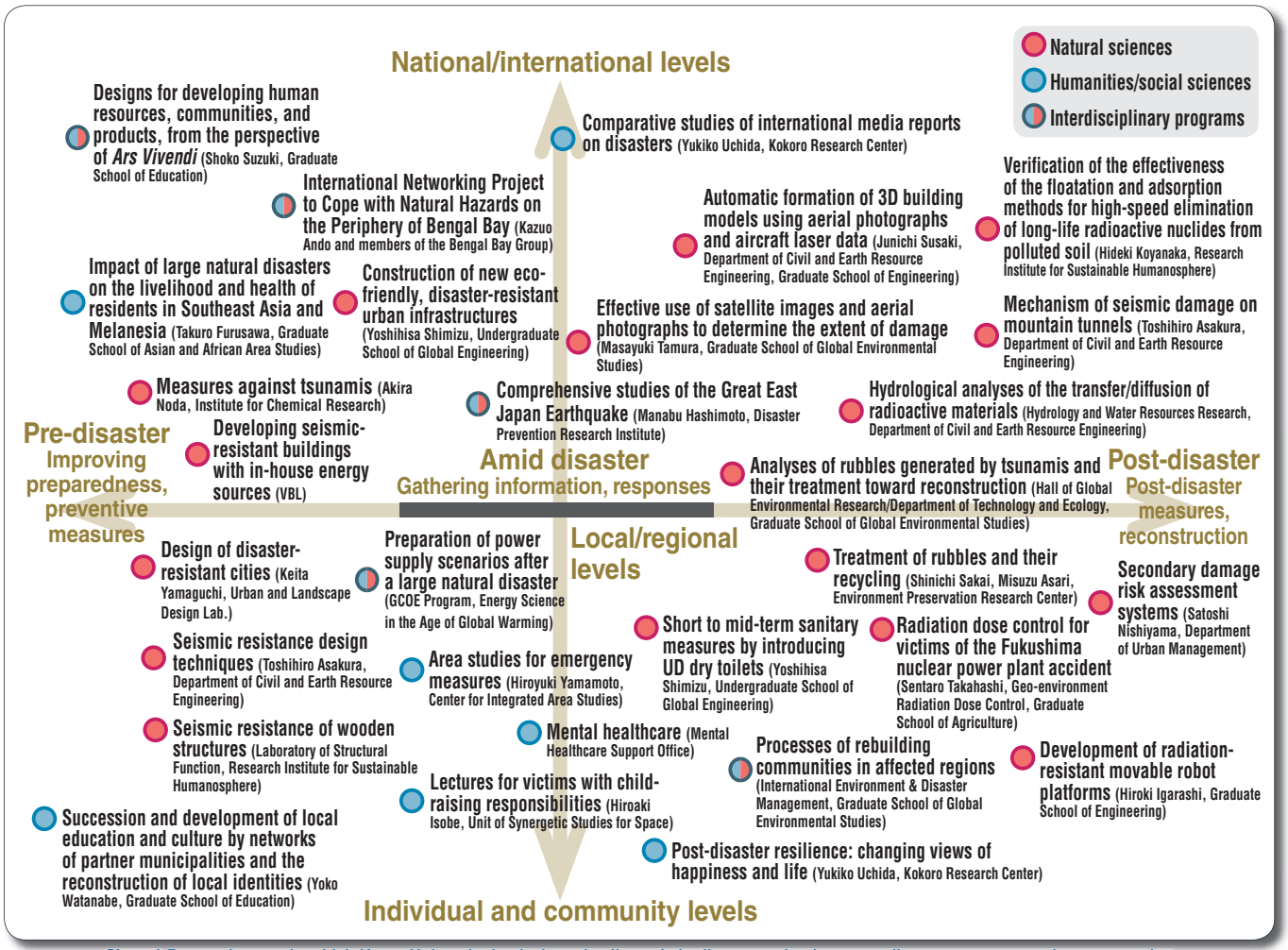


Chart 1 Research areas in which Kyoto University is playing a leading role in disaster reduction, post-disaster recovery, and reconstruction

diverse fields and promote the spirit of *chiko-goitsu*（知行合一: knowledge should conform and coincide with action), the spirit that has been fostered in Kyoto University, which prioritizes academic freedom and researchers' autonomy.

To continue the work of the Conference, some researchers voluntarily formed a working group that held its first meeting on July 1. At the meeting, they discussed a plan to support Japan's reconstruction and to establish an inter-national university emergency support system. Moreover, it was decided that the next Kyoto University Homecoming Day would be held in the coming November on the theme of "the Great Earthquake and Universities." The event will be highlighted by keynote lectures by two alumni politicians and presentations by alumni from Taiwan and Thailand, who will introduce post-earthquake reconstruction efforts in their respective countries.

The University as an Advocating and Acting Organization

Now that half a year has passed since the Great Earthquake, we must begin to focus our efforts on preparing a vision and determining a direction for Japan's reconstruction. In doing so, we must take long-term and broad perspectives and thoroughly deliberate on the ideal state of the country.

In addition to meetings of the Kyoto University Conference on Measures against Large Natural Disasters and for Reconstruction, Kyoto University is holding a series of 18 symposia from July to November (Table 2). The aim of this series is to share information with the public and develop their awareness. The subjects of the symposia include the geological mechanisms of earthquakes and tsunamis, disaster reduction, protection from radiation, mental healthcare, conversion of energy sources to renewable energy sources, and the impact of disasters on art activities. Meanwhile, the Great Earthquake and the nuclear power plant accident revealed various problems relating to information disclosure, such as insufficient disclosure on the part of the Japanese government and the enterprises concerned, inaccurate information provided by the media and their inappropriate information release methods, which sometimes resulted in the spread of rumors, and the general public's passive attitude toward information (lack of will to verify provided information, for instance). Accordingly, we strongly feel that Kyoto University must provide the public with accurate information in a timely and proper manner, thereby fulfilling its responsibility as an independent academic organization. At Kyoto University, we will hold in-depth, interdisciplinary discussions concerning measures for the aftermath and visions for post-disaster reconstruction. Moreover, we will continue to hold discussions on these themes and carry out related programs for ten or more years, and share the outcome with the public.

Executive Vice-President
Yuzo OHNISHI

Removing Radioactive Materials after the Earthquake Kyoto University New Technological Seminar Series: Removal of Radioactive Materials from Soil, and Their Impacts on Plants	**The Great Earthquake and Tsunami No. 1** Emergency Reports about the Great East Japan Earthquake by the Disaster Prevention Research Institute
Removing Radioactive Materials after the Earthquake Kyoto University New Technological Seminar Series: Soil and Water Pollution, and High-Speed Removal of Radioactive Nuclides	**Lessons of the Nuclear Power Plant Accident and Future Energy Policies**
Earthquake Information for International Students The Role of Universities in the Aftermath of the Great East Japan Earthquake –Avoiding Misinformation and Misunderstanding in Academic Research	**The Great Earthquake and Tsunami No. 2** To Prepare for Great Disasters: Limit of Predictability
Post-Disaster Forest-Farm-Sea Link Chain Joint Seminar by Kyoto University Field Science Education and Research Center and the Tohoku Region: Forest-Farm-Sea Link Chain and Coastal Management –Reconstruction of the Coastal Areas in the Tohoku Region	**Improving Disaster Preparedness after the Earthquake** Disaster Preparedness Based on Lessons from the Great East Japan Earthquake
Mental Healthcare after the Earthquake Disaster, Religion, and Mental Healthcare–Reports and Discussions Concerning the Great East Japan Earthquake	**Post-earthquake Medical Treatment, Diagnoses and Prevention of Infectious Diseases** Emergency Medical Services: Report from the Region Affected by the Great East Japan Earthquake and Measures to Take
Building Livable Cities after the Earthquake 2nd Symposium of the Unit for Livable Cities: Envisaging Ideal Cities in Terms of Environmental Preservation and Disaster Preparedness	**Reconstruction and Revival of Local Communities**
Perspectives of Geo-environmental Science about the Aftermath of the Earthquake Geo-environmental Science and Reconstruction Following the Great East Japan Earthquake	**Planning a Resilient "Japanese Archipelago"**
	Disaster and Informatics
	To Continue Regional Work for Recovery from the Great East Japan Earthquake
	The Great Earthquake and Tsunami – Commemorative Academic Lecture for Profeaasor Kajuro TAMAKI
	Summary of a series of Kyoto University Symposia: Wisdom of Kyoto University and Its Use for Japan's Future

Table 2 Series of Kyoto University Symposia: Contemplating a Post-Disaster Society–Toward Building a Safe and Secure Nation– List of Symposia and Their Themes

An English Language Brochure of Research Activities is Now Available

In July 2011, the Kyoto University Research Activities 2011 brochure has been published with the purpose of making the current research activities of our university more widely accessible to the international society.

In addition to providing a sampling of our diverse research activities and the innovative technologies now available for technology transfer, the brochure also provides a glimpse into developments in the World Premier International Research Center Initiative (WPI), the Global Centers of Excellence (GCOE) and other hot topics at Kyoto University.

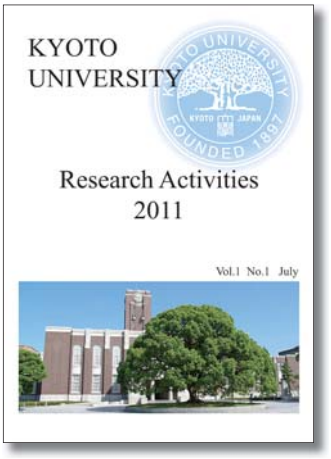
This publication is intended to be an informative source that may be widely distributed throughout the international community, and we hope to continue to print new volumes at regular intervals.

The brochure can also be viewed on the following Website.

http://www.kyoto-u.ac.jp/en/issue/research_activities/index.htm

Brochure Contents

- Message from the President
- Kyoto, the Heartland of Japan
- Kyoto University in a Nutshell
- Global Connections
- Institutes and Research Fields
- Research Topics
- Research Frontiers
- Innovations Available for Collaboration
- Ongoing Industry-Academia Collaborations
- Access to Kyoto University
- General Contact Information



Graduate School of Management Student Organizes a Charity Event at Koç University in Turkey

A Graduate School of Management (GSM) student currently studying abroad in Turkey organized a charity event for the Great East Japan Earthquake at Koç University. This charity event was organized by GSM second-year student, Ken Morimoto, who says, “When the earthquake occurred, my friends, professors, people in offices, cafes, and others were really worried and were very kind to me. Their support gave me strength and my hope was to relay the kindness of the Turkish people to the people of Japan”. The charity event took place on April 27-28, 2011. Sushi was sold to the students, and a concert held for the faculty and public.

The Koç University International Student Society (ISS) assisted with the sushi sales and over 200 servings of sushi were sold in two days. The concert was held with the assistance of the Koç University Office of International Programs (OIP) and was attended by Koç University President Umran Inan and Dean of the College of Administrative Sciences and Economics, Baris Tan. The Vice-Consul General in Istanbul, Kenji Ashida, was invited as a guest speaker to talk about the situation in Japan after the earthquake and to introduce the support activities that the Consulate is undertaking. The speech was followed by a performance by pianist Youki Bessho. Members of the Istanbul Japanese Association and others showed their support by attending the concert.

The entire proceeds were donated to the Japan Red Cross.

*Note: the Graduate School of Management and Koç University Graduate School of Business established an exchange agreement last year, and two GSM students are currently studying in Turkey from this academic year

Mr. Morimoto, organizer of the charity event (front center)

Soft porous crystals — Shining new light on air pollutants using entangled porous frameworks

Distinguishing small structural differences in molecules is still a challenging task for applications in biology, environmental monitoring, and molecular sensor design. A research team led by Professor Susumu Kitagawa of the Institute for Integrated Cell-Material Sciences newly fabricated a "soft porous crystal" that can not only capture a variety of molecules but also differentiate between them with corresponding easily-detected colors.

Porous materials capture molecules. Zeolites are representative of crystalline porous materials used for molecular sieving, heterogeneous catalysis and storage. The rigid silicate body offers permanent porosity. In contrast, flexibility is key to enzymatic performance. The structural reformation of their protein channels and cavities enhances selective recognition and capture of substrates. In 2009, we defined "soft porous crystals" as porous materials that inherently possess both regularity and flexibility. Thus such bimodal porous frameworks would provide not only rigid zeolitic properties but also enzyme-like specificity, producing intelligent materials that are responsive to molecules under the appropriate conditions.

Porous frameworks assembled from metal ions and organic linkers through coordination bonds, known as porous coordination polymers (PCPs) or metal-organic frameworks (MOFs), are the best candidates to realize the concept of soft porous crystals due to their high crystallinities and diverse structural topologies. The principle for design is either to introduce flexible linkers to the framework scaffold or to have a loose assembly of rigid coordination frameworks. In particular, the latter case is a quite characteristic feature of PCPs. Coordination frameworks with stiff linkers tend to be robust, giving no flexibility. However, they can be interdigitated or interpenetrated, where several independent, identical frameworks are entangled, either in an extricable manner (without breaking internal connections) in interdigitated frameworks, or inextricably (i.e., disentanglement can only be achieved by breaking bonds) in interpenetrated frameworks. The constituent frameworks can then undergo a dislocation of their mutual positions, resulting in a variety of guest molecules by changing the pore size and shape to maximize the host-guest interaction (Fig. 1).

We further tried to integrate an intelligent property into soft porous crystals. That is called molecular information decoding. Chemosensors detect a single target molecule from among several molecules, but cannot differentiate targets from one another. We therefore developed a molecular decoding strategy in which a single host domain accommodated a class of molecules and distinguished between them with a corresponding readout. We synthesized the decoding host by embedding naphthalenediimide (NDI) into the scaffold of an interpenetrated porous framework. This new type of soft porous crystals was able to strongly confine a class of volatile organic compounds (VOCs), or tropospheric air pollutants, decoding the chemical substitution information of the aromatic species into recognizable photoluminescence in the visible light region. The aromatic species benzene, toluene, xylene, anisole, and iodobenzene were indicated as blue, cyan, green, yellow, and red, respectively (Fig. 2).

The design principle used for the decoding unit involved incorporating a photoactive organic module, NDI, because of its desirable characteristic photophysical properties. Despite its very low fluorescent quantum yield, NDI interacts with aromatic VOCs and generates an exciplex emission with charge-transfer characteristics, resulting in the production of a new weak fluorescence band. We selected an entangled framework with a twofold interpenetration, $[Zn_2(dicarboxylate)_2(amine)]_n$, in which the dimetal joint was connected by four layers of dicarboxylate units and two pillar amine linkers. The connections form a three-dimensional framework, followed by catenation of the two frameworks. By simply designing the dipyridyl derivative of NDI, we succeeded in synthesizing the interpenetrated framework incorporating NDI moiety in its scaffold as $[Zn_2(bdc)_2(dpNDI)]_n$ (bdc = 1,4-benzenedicarboxylate; dpNDI = N,N'-di(4-pyridyl)-1,4,5,8-naphthalenediimide).

We first determined the structural dynamics in response to guest mol-

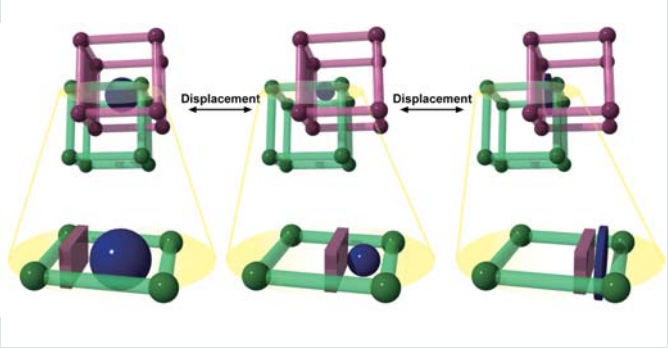


Figure 1

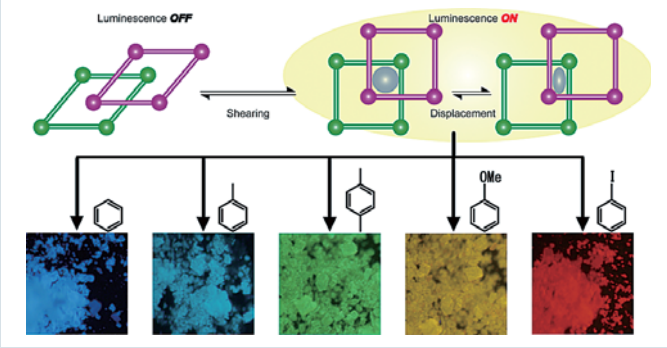


Figure 2

ecule accommodation by single-crystal X-ray diffraction measurement. Three different states of the framework were characterized: DMF (dimethylformamide) incorporated as-synthesized (1), guest-free (2), and VOC incorporated (3). Interestingly, the framework showed different structures depending on the size and shape of guest molecules, DMF for 1 and toluene for 3. In particular, framework 3 demonstrated the entrapment of toluene in its pores, which suggested the strong toluene-NDI interaction with face-to-face fashion. In contrast, the guest-free framework 2 maintained its mutual position and interframework interaction. However, the framework had sheared itself to minimize the void spaces, compared to the guest-accommodated states of 1 and 3.

Then we characterized the photophysical properties of framework 3. It was quite surprising that framework 3, especially with toluene, produced strong emission: 10 times higher quantum yield than in solution. This is because the interaction between toluene and NDI in the pores enhances the intensity of exciplex emission. The other VOCs were also incorporated into the framework and also produced eye-detectable visible light emissions. The plot of the ionization potential of VOCs versus the emission energy of the framework clearly indicated that the increase in the donating ability of VOCs led to the emission red-shift. This observation strongly suggested that the exciplex was based on the charge-transfer character; NDI acted as an electron-acceptor. Furthermore, iodobenzene promotes the characteristic red phosphorescence emission because the presence of a heavy atom that is situated very close to NDI favors the intersystem crossing from the excited singlet state to the close-lying triplet state. The effect of strong confinement in the pores allows the heavy atom compound to lie in close proximity to NDI and enables a sufficient host-guest interaction to produce an effective population in the triplet state, even at room temperature.

Here, we have demonstrated a novel sensing method for distinguishing small structural differences in molecules. Information regarding different phenyl ring substituents of aromatic VOCs is decoded into a corresponding visible light emission and observed as a readout from the decoding matrix based on an NDI-embedded soft porous crystal. The aromatic guest molecules are strongly confined in the nanopores because of a dynamic structural transformation in the framework entanglement, and the resulting host-guest interaction produces enhanced emission that is detectable by the naked eye. This simple yet sophisticated decoding method of combining a single excitation light wavelength and RGB detector will enable novel applications of crystalline porous materials as portable solid-state sensor devices.

Susumu KITAGAWA

- Born in 1951
- Field of specialization: Coordination Chemistry
- Completed doctoral program, Graduate School of Engineering, Kyoto University
- Ph.D., Kyoto University
- Deputy Director/Professor, Institute for Integrated Cell-Material Sciences
- URL http://www.sbchem.kyoto-u.ac.jp/kitagawa-lab/index-e.html
  http://kip.jst.go.jp/eratoeng.html

"I'm always seeking to discover wonders of science that stimulate researchers' passion."

Professor Susumu Kitagawa stated that since his childhood he had been interested in fine arts, particularly craft and painting. Fascinated by the architectural works by Antonio Gaudí, he once aspired to become an architect, he said. After graduating from Kyoto University's doctoral course, he became an assistant professor at Kinki University, where he began to study complex chemistry. After serving as a professor at Tokyo Metropolitan University, he joined the faculty of Kyoto University in 1998. Meanwhile, in the field of complex chemistry, he pioneered a new frontier known as the chemistry of coordination space, and successfully developed porous coordination polymers, which are truly epochal products. Professor Kitagawa believes that nano-space is a "fertile soil, ideal for growing gas alchemy." Using the nano-space in porous coordination polymers, he has been searching for ways to address various problems of the present age, including those related to energy, environmental deterioration, and life. His achievements include the development of a highly sensitive device to detect volatile organic compounds (VOC). In recognition of such achievements, he was honored with the Medal with Purple Ribbon this year.

"Human resources are the most important asset for many activities, but particularly research." Professor Kitagawa said that during his 13 years of service at Kinki University he learned the vital importance of building friendly relationships with many other researchers. He remembered that during his junior high school days, as the captain of a volleyball team he developed his capacity to coordinate team members. His extraordinary leadership, which he has developed throughout his life, helps his research team to achieve remarkable results. In short, all his past deeds, which have been organically linked and integrated, now benefit his activities.

According to Professor Kitagawa, study of a science comprises a series of discoveries, the discovery of wonders which ultimately inspire researchers' passion. "Accordingly, I'm always seeking to discover the wonders of science that stimulate researchers' passion," said Professor Kitagawa with sparkling eyes. Seeing his bright eyes, the interviewer imagined that he was viewing the "Sagrada Familia" soaring in the fertile field of complex chemistry.

Roles played by politicians' villas in Japan's modern political history

Studies of Japanese politics, and functions of villas

In modern Japanese political history, researchers' focus has been basically on policymaking processes and political leadership. In this context, until today few researchers have paid attention to the places that have functioned as stages for strategic policymaking. When politicians' residences have attracted academic attention, they have almost always been studied from the viewpoint of architectural history. Few specialists in political history have considered such residences as their research targets, excepting special cases in which politicians' houses were referred to in their biographical works. As a result, we do not have systematic knowledge as to places where important political talks were held or where policymaking took place in modern Japanese history. In particular, few studies have been conducted regarding politicians' villas even though they comprised essential stages for political decision-making. This is probably because these villas' functions were not so distinctive. The absence of such studies, however, has been an obstacle to progress in studies of political history, impeding deep understanding of past politicians and political history.

To plug up this hole in modern political history, and to conduct basic research concerning the specific places where political decisions were made, over the past several years I have been studying leading politicians' resort villas. Specifically, I have been studying major programs of resort development in Japan and their implication for political affairs. For most Japanese people, the term "villa" means more than a second house for rest and relaxation; they consider a resort villa as a symbol of wealth and power. Politicians' villas, however, have had even greater significance, since politicians sometimes used their villas to contemplate alone and to undergo mental training in a quiet atmosphere, while at other times they held private parties and meetings with other politicians, for important discussions and decision-making.

Political decisions of historical importance were often made in villas. It is well known that immediately before the Russo-Japanese War (1904–1905), a meeting was held at *Murin-an* (Photo 1)—the villa of Aritomo Yamagata in Kyoto. At that meeting, the then Prime Minister Taro Katsura and the then Foreign Minister Jutaro Komura met with two elderly statesmen (titled *Genro*)—Aritomo Yamagata and Hirobumi Ito—in that villa to determine basic diplomatic policies to prepare for negotiations with Russia. In later years, Kinmochi Saionji, known as the last *Genro*, who twice served as Japan's prime minister, decided his successors basically in his villas: *Seifuso* (Photo 2) in Kyoto and *Zagyoso* in Okitsu, Shizuoka Prefecture. Towards the end of World War II, Fumimaro Konoe and Ichiro Hatoyama secretly prepared strategies to terminate the war in their villas in Kyoto and Karuizawa, where they felt that governmental supervision was less tight than in their main residences in Tokyo.

Oiso, *Inner Parlor* for Japan's political circle

Oiso in Kanagawa Prefecture was a special resort during the Meiji period (1868–1912). Known as the "inner parlor for the political circle," the resort was visited by many politicians and other influential figures. Moreover, it was home to villas of eight politicians who served as prime ministers. Behind such a prestigious position of Oiso was the presence of *Sorokaku*, the residence of Hirobumi Ito, the most influential figure of the Meiji government.

Back in 1887, Ito built a villa in Natsushima (Kanagawa Prefecture), where he drafted the Meiji Constitution. There Ito began to love the mild climate and magnificent views of the seaside resort, so in 1896 he built *Sorokaku* (Photo 3) in Oiso, which is also located on the seaside of the Pacific Coast. Even though *Sorokaku* was officially regarded as Ito's main residence, the house had a more unofficial and private atmosphere of a villa, since Ito spent most of his time in Tokyo and in Korea due to his commitment to public service. For Ito, *Sorokaku* was a space for relaxation, contemplation, and to enjoy friendship.

Subsequently, many politicians who were friends of Ito built their villas in Oiso. Next to *Sorokaku*, Kinmochi Saionji constructed his villa, following Ito's advice. Incidentally, Ito called Saionji's villa *Tonariso* (next-door villa),

Photo 1: *Murin-an*

Photo 2: *Seifuso*

Photo 3: *Sorokaku*

an episode indicating Ito's playful character. Takashi Hara also built his villa in Oiso. Ito, Saionji and Hara were leading figures at the time; they all served as the prime minister and the president of the then largest political party (Seiyukai). It is believed that they developed a friendly network in their villas in Oiso. Many other politicians also built their villas in Oiso, including Takaaki Kato and Tadasu Hayashi, who enjoyed close relationship with Ito. Moreover, Ito often held open and frank discussions at *Sorokaku* with his political rivals, particularly Aritomo Yamagata and Shigenobu Okuma.

During the Taisho Period (1912–1926), as a result of progress in transport networks, many other resorts were developed in various parts of the country. Development of such resorts undermined the supremacy that Oiso had enjoyed. Yet, Oiso continued to attract many leading figures in political and business circles. Among such figures was Shigeru Yoshida, who long served as the prime minister, beginning his service shortly after the end of World War II. Even after his retirement from the political world, many politicians visited Yoshida at his residence in Oiso. This was known as *Oiso mode* (pilgrimage to Oiso). As is evidenced in this phenomenon, until a certain epoch after the end of World War II, Japanese political circles maintained the custom of holding private discussions in their resort villas.

In Conclusion

In building a modern nation as a constitutional monarchy, Japanese politicians had to fully exert their leadership. Japan's modernization process was highlighted by the promulgation of the Meiji Constitution (1889), victories in the Sino-Japanese War (1894–1895) and the Russo-Japanese War (1904–1905), and the spread of the Industrial Revolution, all incidents entailing political leaders' exceptional efforts to carefully prepare plans and strategies, maintain close communication with related parties, and make bold decisions. Their villas often functioned as essential venues for these activities. I believe that I can fairly state that what I call villa culture supported Japan's politics at least partially. I will continue my research on politicians' villas, expanding the research scope to include pre-modern ages and overseas villas, and introducing perspectives of comparative studies.

Sochi NARAOKA

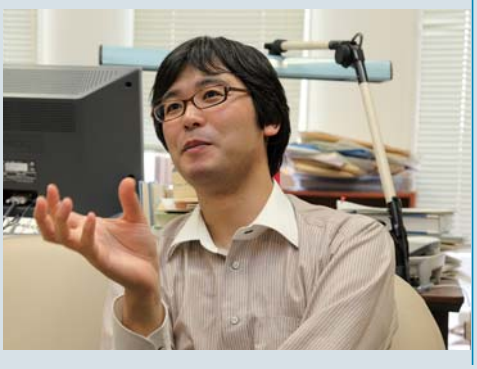
- Born in 1975
- Field of specialization: Political and Diplomatic History
- Completed doctoral program, Graduate School of Law, Kyoto University
- Ph.D., Kyoto University
- Associate Professor, Graduate School of Law

"With decreasing numbers of politicians holding political talks in their villas, Japan's political competency is diminishing."

Associate Professor Sochi Naraoka was born in Aomori Prefecture. During his elementary school days, he read many history books with great enthusiasm. Near his hometown, there are many places of historical importance. Mt. Hakkoda, for instance, is known for a tragic mountaineering accident that occurred during a blizzard in 1902, resulting in the mass death of an infantry group of the Japanese army. Visiting such places and hearing wartime stories from his grandparents, he developed his interest in the war and the process of national policymaking, an interest that eventually led him to study modern political history.

Ever since his graduate school days, Associate Professor Naraoka has been studying pre-World War II political history, focusing on the development process of the two-party system in Japan and diplomatic relations between Japan and Britain. Currently, he is engaged in studies of specific places related to important policymaking, particularly politicians' residences and resort villas. Since politicians and diplomatists tend to differentiate their attitudes between official and unofficial meetings, their real intentions can be heard only at unofficial meetings. To search for hidden truth in history, it is therefore essential to collect data about unofficial meetings. In this relation, politicians' villas were formerly ideal places to hold unofficial talks and negotiations. "Many Japanese politicians of the past age embraced a vision of establishing British-style parliamentary politics in Japan," Associate Professor Naraoka said. "While explicitly announcing this vision as a principle, these politicians often held unofficial talks where they expressed their true intentions so as to draw up more realistic and feasible political or diplomatic strategies," he continued. "Comparing such politicians of the past with their counterparts in the present age, I cannot but feel that present Japanese politicians do not match them in their competency." With these words, Associate Professor Naraoka deplored the decline in contemporary political capabilities.

He said that he was most influenced by Professor Yukio Ito, who firmly believes that researchers should refer to primary sources in order to study historical incidents from the viewpoints of the people living at that time. During this interview, the editor of *Raku-Yu* was impressed by Associate Professor Naraoka's friendly attitude, as well as his strong resolve to complete his research activities thoroughly and uncompromisingly.



Yasser Samir Abdel-Khalek SOKEIRIK
- Born in 1976
- Field of specialization: Pharmaceutical Chemistry
- Completed bachelor and master degrees at Cairo University
- Ph.D., Setsunan University
- Postdoctoral Researcher at Department of Fine Organic Synthesis, Institute for Chemical Research, Kyoto University

"I am happy to engage in advanced studies at Kyoto University under such an excellent professor and with wonderful colleagues, although I feel that I have to do my best to match their knowledge and skills."

Dr. Sokeirik came to Japan seven years ago. Currently, he is engaged in synthesis of organocatalysts at Kawabata Lab., Institute for Chemical Research, Kyoto University. In response to growing demands for a "green & sustainable chemistry," chemists' attention is increasingly focusing on high-performance organocatalysts. Researchers at Kawabata Lab. are developing organocatalysts for regioselective organic reactions, cutting-edge products that provide short cuts to conventional chemical reactions. These catalysts can dramatically shorten the time necessary for developing pharmaceuticals, resulting in significant reductions in production costs. Currently, Dr. Sokeirik is devoted to basic studies of these organocatalysts with his colleagues. He believes that his present studies will help realize his future vision: to form his own drug discovery group back in Egypt.

Dr. Sokeirik was born in an old district in the central part of Cairo. His father was a strict military man, who only gave orders to family members, however, he learnt many things from his father, he recalled. "Being raised in traditional part of Cairo, I spent most of my time at my friends' houses in our neighborhood. It was wonderful that I could play soccer all day long," he said with a big smile. Of his school subjects, he was particularly good at mathematics and chemistry. After entering the Faculty of Pharmacy at Cairo University, he became interested in organic chemistry, which led to him to study in Japan.

His wife is also studying chemistry at Osaka University. Their two children, aged six and three, were born in Japan and teach Japanese to their parents. All his family love Japanese food. They sometimes have *okonomiyaki* (savory pancakes) and *yakisoba* (fried noodles) regularly at home. Dr. Sokeirik loves strolling along old streets and visiting temples in Kyoto. "These places have an atmosphere resembling to that of my home town, so I feel truly relaxed there," he continued. "I am happy to study at Kyoto University since it has such a high educational and research level. Indeed, the University is the right place for anyone aspiring to engage in high-level studies and hard work," he concluded, his eyes sparkling.

Creating the future from the heart of history

There are few places in the world where you can feel history in every corner. Undoubtedly, Kyoto is one of these places. Because I spent most of my life in an old city, I can recognize the importance of Kyoto in preserving the soul of Japanese culture over the time. However, and unlike other historical cities all over the world, Kyoto hasn't stopped making history. Currently, Kyoto is making history from another aspect, through its scientific centers of excellence, of which Kyoto University is the leader of the pack. It is not surprising that the basic concept in research in Kyoto University—as it is mentioned in the research policy statement—is to sustain and develop its historical commitment to academic freedom and to pursue harmonious coexistence within the human and ecological communities on this planet. Under these circumstances, my group in the Institute for Chemical Research is trying to develop new concepts in the field of organic synthesis. Our aim is to harmonize the relationship between chemical processes and environment.

Egypt and Japan have many things in common, such as the use of gold. Two examples of how the gold was important in Egypt and Japan:
1. The golden Mask of Tutankhamun's mummy, the popular icon for ancient Egypt at The Egyptian Museum (1323 BC).
2. The Golden Temple, Kyoto, Japan, 1397.

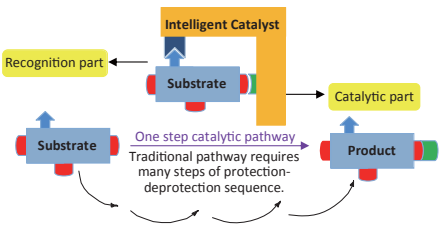
For a long time, the chemical industry and consequently chemical research has been focusing on the economy of chemical processes rather than their sustainability. However, and in response to growing ecological challenges, chemical research has greatly shifted attention during the last two decades towards sustainability alongside economy. It is largely expected that the future of organic chemistry lies at the cutting edge between the economy of the processes and their ecological impact.

On the other hand, the improvement in our understanding of the basic interaction forces between different reactive species, especially in the field of biological chemistry, has greatly enhanced our ability to explore new branches of chemistry that were previously considered unreachable. Based on these factors, a new concept in organic synthesis called "Organocatalysis" has emerged. Organocatalysis is basically the use of metal-free small organic molecules to catalyze organic transformations. Many factors have made organocatalysis a good competitor for convenient metal and enzyme catalysis. Organocatalysts are usually inexpensive and readily available from bio-matter. Ecologically, organocatalysts are mostly non-toxic, easily removed from waste streams and devoid of any toxic metals in the catalytic center. Therefore, organocatalysis is considered a cornerstone in the growing field of green chemistry. Practically, most of the organocatalysts are insensitive to moisture and air and thus easy to handle.

All these reasons pushed our research group to extend the organocatalysis concept into a new area called "Intelligent Organocatalysis." An intelligent organocatalyst is a catalyst that can recognize a special functional group in the substrate and selectively bind to it. Based on this special interaction, the catalyst can introduce the reactant into a distinctive group within the substrate in an absolute regioselective manner (Figure). However, the catalyst design is very crucial. In order to achieve the required regioselectivity, the distance between the binding site and the reactive site of the substrate must strictly match the distance between the recognition site and the catalytic site of the catalyst.

Since most of the bioactive molecules possess multiple functional groups, their regioselective manipulation without the long traditional protection–deprotection sequences presents an attractive means of access to the structurally defined and diverse library in a minimum number of steps. Such functionalization was previously thought only to be possible through sophisticated enzymatic transformation.

I strongly believe that this kind of new catalysis concept will result in great improvement of the field of organic synthesis, and will be a rich, new avenue for both academic thought and industrial applications. This new strategy is expected to reshape the whole field of organic synthesis in the near future.



Intelligent organocatalyst for regioselective functionalization of various substrates.

We want to focus the world's attention on Japan's engineering power.

TBT Team (from left: Akio UESUGI, Akio KITAMURA, Yuya OKAZAKI, Toshiyuki AKISHIBA, and Hiroshi KATAYAMA)

A team of Kyoto University engineering students (TBT Team) won first prize at the second International Contest of Applications in Nano/Micro Technologies (iCAN'11), held in Beijing on June 5 and 6, 2011. The team comprised five freshmen from the master's course of the Graduate School of Engineering. In the contest, participants proposed various application ideas for Micro Electro Mechanical Systems (MEMS) and demonstrated the performance of their prototypes. TBT Team developed Talking Equipment from Manual Signs (TEMS), a system that recognizes manual signs (fingerspellings used in sign language) and converts them into sounds. The editor of *Raku-Yu* had the pleasure of interviewing members of the championship team, who surpassed all the other contest participants, comprising approximately 5,000 students from 15 countries.

How did you come up with the idea of TEMS?

One item to be evaluated at the contest is the extent of the respective entries' contribution to society. So we sought to develop something that can contribute to society. After a long discussion, we reached the conclusion that if we could develop a system to convert manual signs into sounds, this would help communication between the auditory disabled and people who do not know sign language. We all agreed that this would surely contribute to society.

How did you come across the idea of using manual signs? Few people know them well, I assume.

A friend of ours who joined a sign language circle taught us manual signs. In sign language, you would use articulations, or combination of articulations, with fingers, hands, and arms to communicate individual words. However, some words, especially proper nouns, cannot be represented in sign language. In such cases, manual signs or fingerspellings are used. Each manual sign indicates one alphabet character, or in the case of Japanese, a *hiragana* character. By converting *hiragana* manual signs into sounds, we can help communicate even sophisticated sentences.

Were you able to develop a prototype smoothly?

No, it was difficult for us, since we had no experience in assembling electronics. The TEMS comprises magnetic sensors to be attached to the four fingers, a permanent magnet to be attached to the palm, and an acceleration sensor to be attached to the back of the hand. The magnetic sensors measure the bending degree of the fingers. The acceleration sensor detects the direction of the hand. Our idea was to identify the majority of manual signs by using a total of five sensors and a magnet. So far, the idea was excellent, but it was difficult to materialize it. The more sensors you have, the more difficult it becomes to handle the information gained through the sensors. In addition, the more components you have, the more challenging it becomes to build a prototype.

What kind of preparation did you do for the final contest in Beijing?

Of the scores given at the final contest, 70% comprised points given by judge for the final presentations, and the remaining 30% was determined by the votes of visitors to the respective booths. To make our system more appealing to visitors, we developed a compact system which is wearable and portable. Since our system can handle only the Japanese language, we were concerned that it might be difficult for visitors to understand the unique feature of Japanese *hiragana* characters. It means, unlike alphabet characters, each *hiragana* represents one sound, vowel or consonant, so we can convert one manual sign into one sound. We explored the best way to explain this unique phonetic feature of the Japanese language.

That must have been very difficult indeed.

At Kyoto University, we asked international students and other students who are proficient in English to check our presentation. We asked them to check whether or not it was easy to understand. Moreover, we repeatedly rehearsed late at night, after everyone else had left for home, on a temporary stage we had built in the lobby of our school building. We even prepared a detailed script. We were pleased that the visitors well understood the usefulness of our system. In fact, they understood it more than we had expected. We were also impressed by the fair attitude of the Chinese visitors; they were not particularly biased in favor of the Chinese team.

So it was your thorough preparation that brought about the victory?

Well, in my view, the greatest contributor to the victory was the exquisite combination of the unique personal characteristics of each member. In addition, the tradition of Kyoto University allowed us to develop the system as we hoped. Even though our university is located in a traditional, old Japanese city, an open and liberal atmosphere envelops the entire campus, allowing students to freely gain inspiration and ideas. At our laboratory, we are allowed to study basically whatever we wish. We participated in the contest as an extracurricular activity, yet it was a great advantage for us that we were able to prepare the plan by ourselves.

The final question is this: Was it very rewarding for you to participate in the contest?

Of course it was. It was good to have built friendly relationships with overseas students. Since we had never studied abroad, we were not so sure that we could stand on an equal footing with overseas students. After joining the contest, however, we understood that all students, Japanese or international, have similar interests and concerns. The experience gave us confidence, a confidence of being able to compete with overseas engineers on the global stage in the future.

The team donated the prize money to victims of the Great East Japan Earthquake in the Tohoku region, where the preliminary contest was held.

Introducing Study Abroad Programs for Kyoto University Students

Kyoto University's new short-term study abroad programs in Australia were launched successfully in February 2011. The programs are designed to provide students with a rich overseas experience, as well as confidence and competence in English language communication. Sixty-two undergraduate students enrolled in the inaugural 2011 course.

Specifically, we developed two programs to cater to the needs and interests of undergraduate students in humanities and science majors. One is a three-week program called "Inside Australia: Cross-Cultural Communication in English" at the University of Sydney, and the other is a two-week program titled "The Effective Science Communicator in a Global Society" at the University of New South Wales Global. Both are intended to improve cross-cultural awareness and international communication skills. The programs feature English language courses with cross-cultural and scientific themes, guest lectures, field trips and social activities with local students.

Homestay accommodation is also an important element. Living in an English-speaking household enables students to use English regularly in everyday situations, and provides a rich first-hand experience of Australian culture and customs. To ensure that students are well prepared and able to maximize the benefits of their time overseas, both programs feature integrated preparatory courses at Kyoto University. Those for the initial year consisted of a twelve-week comprehensive program, during which students were required to sit the English proficiency test.

The progress of the students' English speaking ability over the duration of their time abroad was assessed by means of comparative interview tests conducted upon arrival and prior to departure from Australia. The feedback from students has been very positive, with students reporting that the programs have broadened their horizons and given them the confidence to pursue international opportunities. For some students, participation in the programs led to long-term overseas study opportunities later this year.

Following the success of the initial 2011 programs, the programs will become credit-bearing courses as of this academic year, allowing students to earn two second-language study credits towards general education courses.

Kyoto University students at the University of Sydney

2nd International Exhibition and Conference on Higher Education and 2nd Japan-Saudi Arabia University Presidents Meeting held in Riyadh, Saudi Arabia

April 19-22, 2011

The 2nd International Exhibition and Conference on Higher Education (IECHE) was held in Riyadh, Saudi Arabia on April 19–22, 2011. The IECHE is a large-scale academic fair organized by the Ministry of Higher Education of Saudi Arabia, which aims to promote student recruitment and inter-university collaboration. The exhibition was attended by representatives from over 400 academic institutions from around the world, including a delegation from Kyoto University lead by Executive Vice-President Yuzo Ohnishi. The opening ceremony featured an address by the Saudi Arabian Minister of Higher Education, Dr. Khalid Bin Mohammad Al-Angari.

The 2nd Japan-Saudi Arabia University Presidents Meeting followed up on the progress made at the inaugural meeting, which was held in Tokyo in July 2010. The meetings aim to enhance the cooperation between higher education institutions in Saudi Arabia and Japan. Executive Vice-President Ohnishi delivered a speech at the meeting, in which he expressed his gratitude for the cooperation and support received from Saudi Arabian institutions, and affirmed Kyoto University's dedication to promoting academic cooperation between the two countries.

Executive Vice-President Ohnishi meets Dr. El-Moamen Abdalla, supervisor of the Academic Dept. of the Royal Embassy of Saudi Arabia Cultural Office

In addition to attending the IECHE's conference sessions, Executive Vice-President Ohnishi met with executives from several leading Saudi Arabian

universities, including King Fahd University of Petroleum and Minerals, King Faisal University and Al Kharj University to discuss academic collaboration and the conclusion of cooperation agreements. Executive Vice-President Ohnishi also assisted with manning the Kyoto University exhibition booth, providing information on Kyoto University to the many enthusiastic young students interested in furthering their academic careers by studying in Japan.

Japan Educational Seminars and Indonesia-Japan Vice-Rectors' Meeting held in Indonesia

May 14-17, 2011

Kyoto University was one of seventeen Japanese universities that participated in the Japan Educational Seminars at three major Indonesian universities, as well as the Indonesia-Japan Vice-Rectors' Meeting in Jakarta. The events were held on May 14–17, 2011 in collaboration with the Indonesian Ministry of National Education.

Indonesia's steady economic growth has led increasing numbers of its students to seek international academic experience. In line with this trend, the Indonesian Ministry of National Education and the country's leading universities are eager to engage in student and faculty exchange with Japanese institutions.

The Japan Educational Seminars, study abroad fairs for students with an interest in studying in Japan, were held as part of the Japanese government's Global 30 Project for Establishing Core Universities for Internationalization (G30) initiative with the support of the Embassy of Japan in Indonesia and the Japan Student Services Organization (JASSO). The seminars were held at Al-Azhar University in Jakarta (May 14), Bandung Institute of Technology in Bandung (May 15) and Gadjah Mada University in Yogyakarta (May 17). The Japanese universities operated booths and gave presentations about study opportunities for international students in Japan. Several universities also provided mock lectures. The Indonesian students were particularly eager to learn about the English-taught degree courses offered by Japanese universities, and all of the seminars were well attended by enthusiastic students.

In conjunction with the Japan Educational Seminars, the Indonesia-Japan Vice-Rectors' meeting was held at the Directorate General of Higher Education Auditorium of the Indonesian Ministry of National Education in Jakarta. The event was attended by Indonesia's National Education Minister, Dr. Mohammad Nuh and vice-president level executive staff from the seventeen Japanese universities and twenty-two Indonesian universities. Professor Akihiko Akamatsu, executive vice-president for student affairs, represented Kyoto University at the event. The meeting provided the delegates from both countries with an excellent opportunity to actively exchange views and information on the topic of international academic exchange.

Indonesia's National Education Minister, Dr. Mohammad Nuh (L) and Executive Vice-President Akihiko Akamatsu (R)

A Symposium was organized by Kyoto University in Association with RU11 "The Role of Universities in the Aftermath of the Great East Japan Earthquake"

July 15, 2011

Held at Kyoto University on July 15, 2011, this symposium aimed to explore the ways in which the efforts of research universities can best contribute to the recovery process in the wake of the Great East Japan Earthquake and tsunami disaster of March 11, 2011, and the subsequent nuclear disaster at the Fukushima I (Daiichi) Nuclear Power Plant.

The symposium was organized by Kyoto University in association with Research Universities 11 (RU11), a consortium of eleven of Japan's leading research universities, and was open to the general public. The language of the symposium was English and over 80 people including international students and researchers from throughout Kyoto participated, successfully inducing a lively exchange of ideas.

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Shoren-in Temple: the "Temple of Light"—Presenting Japanese Aesthetic Values and View of the World

青蓮院門跡

Shoren-in Temple is located in Awata, about two kilometers south of Kyoto University Yoshida Campus. From the campus it takes about 30 minutes on foot. Being one of the five Monzeki temples of the Tendai sect of Buddhism in Kyoto, the Temple has high prestige, with successive chief priests having been selected primarily from the Imperial family.

The Temple's name derives from Shoren-bo, one of the lodging facilities for priests built atop Mt. Hiei when Saicho, the founder of the Tendai sect of Buddhism, started his preaching at the mountain toward the end of the 8th century. In the mid-12th century, the retired Emperor Toba made his seventh son study under Shoren-bo's chief priest. At the same time, the retired Emperor built a residence in Kyoto, which had a similar architectural style to his own Imperial residence, and named it Shoren-in. In 1788, after the Imperial Palace was destroyed by a great fire, the retired Emperor Gosakuramachi lived in the Temple for a while. Accordingly, the Temple temporarily served as an Imperial Palace. Today, the Temple is also known as the Awata Palace, and is designated as a historic site of the former temporary palace.

Since most of the Temple's structures were destroyed by a fire in 1893, the majority of the present structures were rebuilt after the fire. Yet, they create a majestic and elegant atmosphere, almost similar to that of the Imperial Palace. The Temple's garden, featuring a pond at its center, was created by celebrated garden designers: Soami and Enshu Kobori. The garden continues to enchant visitors with its magnificent natural beauty in all four seasons. Moreover, at the Shogunzuka Mound and Dainichi Temple, located in Shoren-in's separate compound atop Mt. Higashiyama, visitors can enjoy panoramic views of the entire Kyoto city.

The Temple's main deity, Shijoko Nyorai Buddha, represents divine light. To signify the light as the Temple's main feature, every spring (from March to May) and autumn (from November to early December), the Temple illuminates its garden and structures, and opens them to visitors during night hours. The sophisticated illumination transforms the precinct into a mysterious world.

The Temple's lighting at night transforms the garden into an ethereal, mysterious world.

Illuminated maple foliages near the Shogunzuka Mound and Dainichi Temple are like the flames burning light behind an image of Cetaka (Buddhist deity).

The Painting of the Blue Cetaka (a blue guardian deity and National Treasure) is one of the three best images of Cetaka in Japan.

Shinden Hall, the Temple's largest structure, features a hipped and gabled roof with tiles of wavy sections. The spirit of successive chief priests and related emperors are enshrined in the hall with the display of memorial tablets devoted to them.

Kacho-den Hall exhibits pictures of the Thirty-Six Master Poets. Views of the garden from the hall are truly breathtaking.